

**ABSTRACT OF THE DISCLOSURE**

5 An improved data signal electromagnetic emissions system is provided for sending data signals over one or more data pathways. An original data signal is encoded into a set of sideband frequencies that exhibit a lower amplitude than the original data signal; then transmitted over the data pathway and later decoded back into a signal having the original data content. The encoding scheme uses a number of modulation pattern sets that each produce a set of sidebands about the data signal's fundamental and certain harmonic frequencies, in a manner that attempts to make the maximum amplitudes for each set of sidebands substantially equal to one another, although this is also dependent upon the data signal's frequency content.

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